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09/651,648	08/30/2000	Yeon-Joo Kim	678-527 (P9546)	1400

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EXAMINER

LERNER, MARTIN

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/651,648

Applicant(s)

KIM, YEON-JOO

Examiner

Martin Lerner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004 and 20 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 20 is/are pending in the application.
- 4a) Of the above claim(s) 7 to 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 to 6 and 13 to 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, Claims 1 to 3 and 13 to 19 in Paper No. 7 is acknowledged.

2. The traversal is on the grounds that Group I and Group II are not patentably distinct. Applicant maintains that the step of transmitting a reverse connect order as set forth by Group II is equivalent to the step of transmitting a speech recognition/character display notification request message of Group I. This is not found persuasive because one skilled in the art would not find that a reverse connect order is equivalent to transmitting a speech recognition/character display notification request message. A reverse connect feature suggests a term of art designating an automatic callback, as exemplified by a procedure following a caller identification, where a called party is reconnected to a calling party after the calling party has hung up.

Furthermore, Applicant traverses the restriction requirement on the grounds that Groups III and IV are not patentably distinct from one another. Applicant has amended independent claim 12 of Group IV, so as to eliminate the limitation to a paging message, which is the asserted basis for the patentable distinction between Groups III and IV. Here, this position is moot insofar as Applicant has elected Group I, and there is no persuasive showing that either of Groups III and IV should be examined with Group I. Upon filing of a divisional or continuation application, it is agreed that, as amended,

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Groups III and IV appear to be no longer appear patentably distinct from one another, and should be examined together. However, the issue remains moot until such time as claims are actually presented in a divisional or continuation application.

The requirement is still deemed proper and is therefore made FINAL.

3. Claims 7 to 12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 7.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 4, 5, 13, 14, 15, 19, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by *Yamakita* ('681).

Regarding independent claim 1, *Yamakita* ('681) discloses a speech recognition apparatus, comprising:

“an RF Module for processing an RF signal received from a base station” – mobile terminal 101 has a radio antenna 205 for originating a call to the radio base station 102 (column 7, lines 63 to 67: Figure 2); communication section 111 originates a call to the radio base station 102 by radio (column 4, lines 5 to 28: Figure 1); mobile terminal 101 also receives TCP/IP packets through radio base station 102 (column 6, lines 4 to 11: Figure 1);

“a memory storing a speech character conversion table having conversion data for use in converting voice data to character data” – phoneme standard pattern dictionary 1305 (Figure 11); format type field dictionary 1503 (Figure 13);

“a speech recognition and character conversion unit for converting a voice signal received from the base station to voice data using speech recognition and for converting the voice data to character data by referring to the speech/character conversion table – text to speech recognition section 117 executes text speech recognition processing for transferred speech data and transfers the recognition result to a formatted text generation section 118; the formatted text generation section 118 determines the field of the recognized speech text data output from the text speech recognition section 117 using the format type data which is designated from the mobile terminal 101, and generates formatted text data (column 5, lines 28 to 44: Figure 1); it is noted the claims do not require all of the components to reside only in the mobile phone, just in the mobile system;

“a display for displaying the converted character data” – mobile terminal 101 has an LCD display section 203 (column 7, lines 55 to 62: Figure 2);

“a controller for providing overall control to the mobile phone, transmitting a speech recognition notification request message to the base station in a speech recognition and character display mode, and controlling the speech recognition and character display operation” – control section 110 in the mobile terminal 101 displays formatted text data on an LCD display section (column 6, lines 12 to 18: Figure 1); a text speech recognition/formatting start request command (“speech recognition notification request message”) and a text speech recognition/formatting end request command are sent by mobile terminal 101 based on an instruction from the user (column 4, lines 35 to 53: Figure 1); it is control section 110 in the mobile terminal 101 that generates speech recognition/formatting start and end request commands.

Regarding independent claim 4, *Yamakita* (‘681) discloses a method for speech recognition, comprising:

“transmitting a speech recognition and character display notification request message to a base station” – a text speech recognition/formatting start request command (“speech recognition and character display notification request message”) and a text speech recognition/formatting end request command are sent by mobile terminal 101 based on an instruction from the user through radio base station 102 (column 4, lines 35 to 53: Figure 1);

“receiving a voice signal from a base station” – control section 110 in the mobile terminal 101 requests the communication section 111 to transmit speech data input from a microphone to the packet transmission/reception section in the speech control

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host unit 108 through radio base station 102, PHS network 103, mobile terminal control host unit 104, Internet 105, and router unit 106 (column 5, lines 8 to 22: Figure 1); thus, speech control host unit 108 receives speech data from a radio base station 102 (Figure 1);

“converting the received voice signal to voice data using speech recognition” – text to speech recognition section 117 executes text speech recognition processing for transferred speech data and transfers the recognition result to a formatted text generation section 118 (column 5, lines 28 to 44: Figure 1);

“converting the voice data to character data” – the formatted text generation section 118 determines the field of the recognized speech text data output from the text speech recognition section 117 using the format type data that is designated from the mobile terminal 101, and generates formatted text data (column 5, lines 28 to 44: Figure 1);

“displaying the converted character data on a display of the mobile phone” – mobile terminal 101 has an LCD display section 203 (column 7, lines 55 to 62: Figure 2); control section 110 in the mobile terminal 101 displays formatted text data on an LCD display section (column 6, lines 12 to 18: Figure 1).

Regarding independent claim 13, *Yamakita* ('681) discloses a speech recognition system, comprising:

“a memory for storing a speech/character conversion table for converting voice data to character data” – phoneme standard pattern dictionary 1305 (Figure 11); format type field dictionary 1503 (Figure 13);

“a speech recognition and character conversion unit for converting a voice signal received from a base station into character data based on the conversion table” – text to speech recognition section 117 executes text speech recognition processing for transferred speech data and transfers the recognition result to a formatted text generation section 118; the formatted text generation section 118 determines the field of the recognized speech text data output from the text speech recognition section 117 using the format type data which is designated from the mobile terminal 101, and generates formatted text data (column 5, lines 28 to 44: Figure 1); all speech recognition requests between mobile unit 101 and speech control host unit 108 pass through base station 102 (Figure 1);

“a controller for determining whether a voice recognition mode has been chosen by the user and informing the base station if the user has chosen the voice recognition mode” – a text speech recognition/formatting start request command (“speech recognition and character display notification request message”) and a text speech recognition/formatting end request command are sent by mobile terminal 101 based on an instruction from the user (column 4, lines 35 to 53: Figure 1); it is control section 110 in the mobile terminal 101 that generates speech recognition/formatting start and end request commands; all speech recognition requests between mobile unit 101 and speech control host 108 pass through base station 102 (Figure 1);

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“wherein the controller displays the voice converted character data as a text message on a display if the user has chosen the voice recognition mode” – mobile terminal 101 has an LCD display section 203 (column 7, lines 55 to 62: Figure 2); control section 110 in the mobile terminal 101 displays formatted text data on an LCD display section (column 6, lines 12 to 18: Figure 1).

Regarding claims 2 and 5, *Yamakita ('681)* discloses a text speech recognition/formatting start request command (“speech recognition and character display notification request message”) and a text speech recognition/formatting end request command are sent by mobile terminal 101 based on an instruction from the user (column 4, lines 35 to 53: Figure 1); the request commands are sent by mobile unit 101 through base station 102 to speech control host unit 108, which then performs speech recognition and formatting for mobile unit 101.

Regarding claim 14, *Yamakita ('681)* discloses mobile terminal 101 has a radio antenna 205 for originating a call to the radio base station 102 (column 7, lines 63 to 67: Figure 2); communication section 111 originates a call to the radio base station 102 by radio (column 4, lines 5 to 28: Figure 1); mobile terminal 101 also receives TCP/IP packets through radio base station 102 (column 6, lines 4 to 11: Figure 1).

Regarding claim 15, *Yamakita ('681)* discloses speech input processing is selected from a touch panel input (“a menu”) on mobile terminal 101 (column 10, lines 27 to 35: Figures 3 and 4: Step 108).

Regarding claim 19, *Yamakita* ('681) discloses the text speech recognition section 117 and formatted text generation section 118 are located in speech control host unit 108 ("the base station").

Regarding claim 20, *Yamakita* ('681) discloses the steps of: determining whether a key has been pressed on a touch screen (column 10, lines 1 to 35), transmitting text speech recognition/formatting start and end request commands (column 4, lines 35 to 53: Figure 1), receiving speech data at speech control host unit 108 via base station 102 (column 5, lines 7 to 13: Figure 1), converting the speech data to voice data and character data with text speech recognition section 117 and formatted text generation section 118 (column 5, lines 28 to 44: Figure 1), and displaying the formatted text on LCD display of mobile terminal 101 (column 6, lines 12 to 18: Figure 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 6, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Yamakita* ('681) in view of *Yamakita* ('287).

Yamakita ('681) transmits speech data from mobile terminal 101 to speech control host 108 ("the base station"), but omits transmitting a voice information message from the speech control host 108 back to a corresponding caller using mobile terminal

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101. However, it is fairly common in a client/server architecture for a base station server to transmit speech messages, either for voice mail retrieval or interactive voice response, back to a mobile client. *Yamakita* ('287) teaches a similar voice data transmission/storage system, where a portable terminal 1 accesses voice data through a network 2 from voice data storage computer 3, so that when a voice data transfer request is issued, the voice data storage computer 3 transfers the voice data to the portable terminal. (Column 2, Lines 26 to 43: Figure 1) The stated advantage is that the terminal does not need a large-capacity memory to store voice data, so that the size can be reduced. (Column 1, Lines 47 to 56) It would have been obvious to one having ordinary skill in the art to transmit voice information, including voice mode information, from a base station to a caller at a mobile terminal as taught by *Yamakita* ('287) in the client/server speech recognition architecture of *Yamakita* ('681) for the purpose of storing voice data so that the terminal does not need a large-capacity memory and can have reduced size.

8. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Yamakita* ('681) in view of *Yamakita* ('287) as applied to claims 13 and 16 above, and further in view of *Jacobs et al.*

Concerning claim 17, *Yamakita* ('681) includes the text speech recognition section 117 and formatted text generation section 118 within speech control host unit 108, but omits locating these elements within mobile terminal 101. It is generally known, however, to distribute speech recognition functions between a mobile terminal

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and a base station in a client/server architecture, as it is more efficient to perform computationally intensive operations within a base station, but it also may be advantageous to execute simple speech recognition operations within a mobile terminal to reduce dependence on slow traffic networks. *Jacobs et al.* teaches a distributed voice recognition system between a portable cellular telephone and a cell base station, where a local word decoder 106 resides in a handset 100, to lessen the average time that a channel is busy and increase average recognition accuracy. (Column 4, Line 63 to Column 5, Line 21; Column 8, Lines 28 to 56: Figure 5) It would have been obvious to one having ordinary skill in the art to place at least some of the speech recognition and character conversion operations within a mobile phone in *Yamakita* ('681) as suggested by *Jacobs et al.* for the purpose of lessening the average time that a channel is busy and increasing average recognition accuracy.

Concerning claim 18, *Yamakita* ('287) teaches a similar voice data transmission/storage system, where a portable terminal 1 accesses voice data through a network 2 from voice data storage computer 3, so that when a voice data transfer request is issued, the voice data storage computer 3 transfers the voice data to the portable terminal 1, as discussed above. (Column 2, Lines 26 to 43: Figure 1)

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Park, Majaniemi, Stackhouse, Vance et al., and Reed et al. disclose related art.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
5/18/04



Martin Lerner
Examiner
Group Art Unit 2654